

**RECEIVED
CENTRAL FAX CENTER****MAR 06 2007**
Atty Dkt. No.: 10031551-1
USSN: 10/813,467**REMARKS**

In view of the following remarks, the Examiner is requested to allow claims 28-59 and 61, the only claims pending and under examination in this application after entry of the above amendments.

Claims 28 and 56 have been amended to indicate that the claimed methods are directed to the production of an addressable array. Support for these amendments may be found throughout the specification and claims as originally filed. For instance, support may be found at page 10, lines 12 to 26. Claims 33, 36 and 54 have been amended to clarify the claim language. Claim 34 has been amended to indicate a nascent surface of a planar solid support. Support for this amendment may be found at page 20, line 21. Claim 60 has been cancelled. Claim 61 has been added. Support for new Claim 61 may be found at page 9, line 16.

Accordingly, no new matter has been added by way of these amendments and their entry is respectfully requested.

Claim Objections

Claim 34 has been objected as being the same as Claim 31. In view of the amendment to Claim 34 this objection may be withdrawn.

Claim Rejections – 35 U.S.C. § 112, second paragraph

Claims 36 and 54 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Without in any way agreeing with the position of the Office and solely in order to expedite prosecution of the present application, the Applicants have amended Claims 36 and 54. In view of the amendments to Claims 36 and 54 this rejection may be withdrawn.

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Claim Rejections – 35 U.S.C. § 102

Claims 28-34, 39-43, 46-48, 50-51 and 54-59 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Anderson *et al.* (U.S. Patent No. 6,426,184).

According to the M.P.E.P., a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. See M.P.E.P. § 2131.

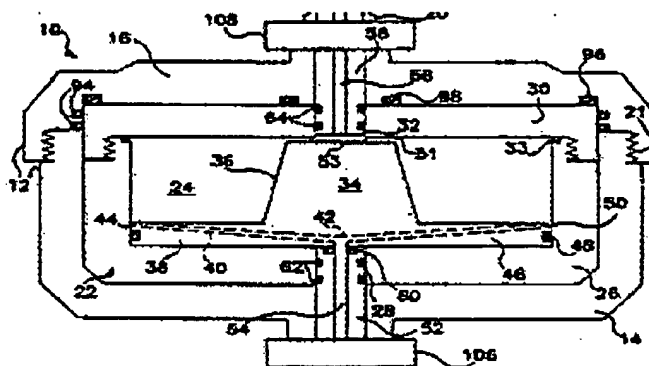
The rejected claims are directed to a method for producing an addressable array of oligonucleotides on a substrate. The method includes contacting a substrate containing a plurality of addressable features that include a surface attached blocked nucleoside monomer blocked with a blocking group, or a surface attached polymer blocked with a blocking group, with a deblocking fluid to remove the blocking group, thereby generating an unblocked attached nucleoside monomer or polymer. The method further includes displacing the deblocking fluid from the substrate surface with a purging fluid and reacting the attached unblocked nucleoside monomer or polymer with another blocked nucleoside monomer to produce an addressable array of oligonucleotides.

As recited at page 10, lines 15 to 19 of the Applicants' specification, an "array is 'addressable' when it has multiple regions of different moieties (e.g., different polynucleotide sequences) such that a region (i.e., a "feature" or "spot" of the array) at a particular predetermined location (i.e., an "address") on the array will detect a particular target or class of targets".

The Applicants contend that Anderson does not teach the production of an addressable array. Anderson does not teach the production of an addressable array because Anderson is directed to a centrifugal synthesizer, as exemplified in the

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figure below. The centrifugal synthesizer (10) includes a rotor body (12) containing a hollow core defining a chamber (24), a central core member (34) and a means for generating and introducing fluids (e.g., reagents) of different densities into the hollow core of the rotor body during rotation such that the fluids introduced form layers of differing densities.



The hollow core (24) of the rotor body (12) is filled with a suspension of a sedimented solid phase support medium. The centrifugal synthesizer functions to control the flow of liquid across the solid phase support. There is, however, no teaching in Anderson with respect to using the disclosed centrifugal synthesizer to produce an addressable array. Rather, the solid phase support being in the fluid suspension is uniformly contacted with the same reagents. Hence, because the solid phase support is contacted with the same reagents, Anderson does not teach the production of an array that contains different chemical moieties at particular predetermined locations. Accordingly, Anderson is deficient in that it fails to teach an addressable array.

In view of the above, Anderson does not anticipate the Applicants' claims because Anderson does not teach all the elements of the rejected claims. Therefore, the Applicants respectfully request that the 35 U.S.C. § 102(b) rejection of Claims 28-34, 39-43, 46-48, 50-51 and 54-59 be withdrawn.

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Claim Rejections – 35 U.S.C. § 103

Claims 28 and 37 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson *et al.* in view of Green *et al.*

According to the MPEP § 706.02 (j), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Claim 37 depends from Claim 28. An element of Claim 28 is the production of an addressable array oligonucleotides.

As described above, Anderson fails to teach the production of an addressable array oligonucleotides.

Furthermore, Anderson fails to suggest an "addressable" array of oligonucleotides because the sedimented solid phase supports are in the suspension within the chamber of the hollow rotor and are contacted with the same reagents. Because the solid phase supports are contacted with the same reagents, Anderson does not suggest the production of an array that contains different chemical moieties at particular predetermined locations. Accordingly, Anderson is deficient in that it fails to suggest an addressable array.

As Green was cited solely for its alleged disclosure of the density of a purging fluid, it fails to remedy the deficiencies of Anderson.

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In view of the above, the combined teaching of Anderson in view of Green fails to teach or suggest all of the elements of the claimed invention. As such, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 28 and 37 be withdrawn.

Claims 28 and 44-45 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson *et al.* in view of Main *et al.*, (U.S. Patent No. 6,319,469)

Claims 44 and 45 ultimately depend from Claim 28. An element of Claim 28 is the production of an addressable array oligonucleotides. As described above, Anderson is deficient in that it fails to teach or suggest the production of an addressable array oligonucleotides. As Main was cited solely for its alleged disclosure of variable flow rates, it fails to remedy the deficiencies of Anderson. The Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 28 and 44-45 be withdrawn.

Claims 28, 29 and 49 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson *et al.* in view of Gamble *et al.*, (U.S. Patent No. 5,874,554)

Claims 29 and 49 ultimately depend from Claim 28. An element of Claim 28 is the production of an addressable array oligonucleotides. As described above, Anderson is deficient in that it fails to teach or suggest the production of an addressable array oligonucleotides. As Gamble was cited solely for its alleged disclosure of a pulse jet, it fails to remedy the deficiencies of Anderson. The Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 28, 29 and 49 be withdrawn.

Claims 28, 44 and 53 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson *et al.* in view of Farr *et al.*, (U.S. Patent No. 3,969,250)

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Claims 44 and 53 ultimately depend from Claim 28. An element of Claim 28 is the production of an addressable array oligonucleotides. As described above, Anderson is deficient in that it fails to teach or suggest the production of an addressable array oligonucleotides. As Farr was cited solely for its alleged disclosure of a pressure gradient, it fails to remedy the deficiencies of Anderson. In The Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 28, 44 and 53 be withdrawn.

Nonstatutory Double Patenting

The claims of this application have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over copending Application Nos. 11/234,701, 10/813,337, 10/813,331 and 10/449,838 in view of Anderson et al.

Solely to expedite prosecution, the Applicants provide herewith a Terminal Disclaimer over U.S. Patent Application Nos. 11/234,701, 10/813,337, 10/813,331 and 10/449,838.

The Applicants note that the filing of a Terminal Disclaimer to obviate a rejection based on non-statutory double patenting is not an admission of the propriety of the rejection.¹ As such, while the Applicants firmly believe that this rejection fails to meet the requirements for Obviousness-Type Double Patenting set forth in MPEP § 804, a Terminal Disclaimer is nevertheless filed.

Accordingly, in view of terminal disclaimer(s) filed herewith, the Applicants respectfully request that this rejection be withdrawn.

¹ *Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870, 20 USPQ2d 1392 (Fed. Cir. 1991). The court indicated that the "filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither a presumption nor estoppel on the merits of the rejection."

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New Claim

New Claim 61 depends from Claim 28 and incorporates the elements recited therein. Accordingly, for the reasons stated herein above, Claim 61 is patentable.

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Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 833-7770.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10031551-1.

Respectfully submitted,

Date: March 6, 2007By: James S. Nolan
Registration No. 53,393Date: March 6, 2007By: Bret E. Field
Registration No. 37,620

Enclosure(s): Terminal Disclaimer(s) as to U.S. Patent Application Nos. 11/234,701, 10/813,337, 10/813,331 and 10/449,838.

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